



# What is Ground Water?

Ground water is the water that is found beneath the earth's surface. Have you ever driven on a road cut along the side of a hill and seen what looked like layers inside the earth? If we could see the ground beneath us, it would look very similar. The top layer of earth is dirt, but as you get deeper, the dirt changes into layers of solid rock. Believe it or not, each of these layers has many small spaces and cracks filled with water. Ground water moves slowly as it finds its way from space to space in the rock.

## Why is Ground Water Important?

Ground water is an important water source for all of us. The United States uses about 77,500 million gallons of ground water each day for all sorts of uses like drinking water, washing clothes, watering crops, and making food products. Over half of the people in the U.S. rely on ground water for drinking.

## Is our Ground Water Clean?

States report that their ground water quality is good overall. Unfortunately, many states do have areas with polluted ground water. The most commonly cited pollutants in ground water include manufactured compounds (like gasoline products) and nitrates.

## What Causes Ground Water Pollution?

States report that most pollution is caused by gasoline and other fuels that leak from tanks buried underground. Gas stations aren't the only places with buried tanks. People who use oil for heat in the winter often have tanks buried in their backyards. Other potential pollution sources that you can't see include leaky septic systems and leaky landfills.

Ground water pollution can also begin above ground. If man-made ponds that are used to treat wastewater are not properly installed and maintained, they can leak polluted water into the ground. Pollution such as chemicals spilled on the ground, bacteria and nutrients from livestock areas, and pesticides and nutrients from farmland can also seep down to the ground water.

## Can We Fix the Problems?

Sometimes ground water pollution is caused by different types of sources that slowly leak a little pollution. Because the sources are spread out, environmental managers have a difficult time finding and controlling the pollution. In other cases, one pollution source (such as a buried fuel tank) can leak a large amount of pollution into the ground water. Once this pollution is discovered, environmental managers can often pinpoint the source and stop the pollution. However, even if a source is pinpointed and removed, the pollution already in the ground water is difficult to clean up. Therefore, the best way to fix ground water pollution is to keep it from happening in the first place.

## What Can I do to Protect My Ground Water?

First of all, become informed. A great place to start is EPA's ground water and drinking water homepage at [www.epa.gov/ogwdw](http://www.epa.gov/ogwdw). Does your drinking water come from ground water? How often is it tested? What products in use around your house (paints, cleaners, lawn chemicals) could pollute your ground water if they were poured down the drain or dumped outside? What activities on the land might affect your ground water quality? Next, do something with what you've learned. Encourage your family to switch to environmentally safe products. Help others learn about the importance of ground water through a class project or a booth at a fair. Visit the Ground Water Foundation's web site at [www.groundwater.org](http://www.groundwater.org) for more ideas and information on the annual Children's Ground Water Festival and Ground Water University.